

WHAT IS CLAIMED IS:

- 1 1. A hands-free telephone system for a vehicle comprising:
2 a cell phone located in the vehicle, the cell phone being operable for
3 enabling an operator to make a cell phone call with a phone external to the vehicle;
4 and
5 a vehicle appliance integrated into the vehicle, the vehicle appliance
6 having a controller, a communications module, memory, and a voice synthesizer;
7 the communications module being operable for wirelessly
8 communicating with the cell phone to detect when the cell phone receives an
9 incoming call from an external phone having a telephone number and to receive the
10 telephone number of the external phone from the cell phone;
11 the memory being operable for storing a list of names and associated
12 telephone numbers;
13 the controller being operable for accessing the memory to locate a
14 name stored in the memory corresponding to the telephone number of the external
15 phone;
16 the voice synthesizer being operable for outputting the name
17 corresponding to the telephone number of the external phone over a vehicle speaker
18 for the operator to hear.
- 1 2. The system of claim 1 wherein:
2 the vehicle appliance further includes a display module operable with
3 the controller for generating a textual display of the name corresponding to the
4 telephone number of the external phone for output by a vehicle radio display for the
5 operator to view.
- 1 3. The system of claim 1 wherein:
2 the vehicle appliance further includes a text-to-speech (TTS) module
3 and the incoming call is a text message, wherein the communications module is
4 further operable to wirelessly communicate with the cell phone to receive the text
5 message from the cell phone, wherein the TTS module is operable with the
6 communications module for converting the text message into speech and the voice

7 synthesizer is operable for outputting the speech over the vehicle speaker for the
8 operator to hear.

1 4. The system of claim 3 wherein:
2 the vehicle appliance further includes a display module operable with
3 the communications module for displaying the text message on the vehicle radio
4 display for the operator to view.

1 5. The system of claim 1 wherein:
2 the vehicle appliance further includes a voice recognition module
3 operable for recognizing voice commands stated by the operator, wherein the
4 controller generates a control signal to control operation of a vehicle component in
5 response to a vehicle component voice command received by the voice recognition
6 module from the operator.

1 6. The system of claim 1 wherein:
2 the cell phone stores a phonebook having entries, each entry
3 including a name text and an associated telephone number;
4 wherein the vehicle appliance further includes a text-to-speech (TTS)
5 module;
6 wherein the communications module wirelessly communicates with
7 the cell phone to receive a selected phonebook entry from the cell phone;
8 wherein the TTS module converts the name text of the selected
9 phonebook entry into a voice tag for play by the voice synthesizer over a vehicle
10 speaker for the operator to hear;
11 wherein the memory stores the converted voice tag and the associated
12 telephone number of the selected phonebook in a phonebook for access by the voice
13 synthesizer.

1 7. The system of claim 6 wherein:
2 the communications module wirelessly communicates with the cell
3 phone to receive the selected phonebook entry using the OBEX file transfer
4 protocol.

1 8. The system of claim 6 wherein:
2 the controller is operable for accessing the memory to determine if
3 the converted voice tag of the name text of the selected phonebook entry
4 corresponds to a voice tag of a name text already stored in the memory;
5 if the converted voice tag of the name text of the selected phonebook
6 entry corresponds to a voice tag of a name text already stored in the memory, the
7 voice synthesizer outputs an indication over the vehicle speaker for the driver to
8 hear indicating that the converted voice tag of the name text of the selected
9 phonebook entry corresponds to a voice tag of a name text already stored in the
10 memory.

1 9. A hands-free telephone system for a vehicle comprising:
2 a Bluetooth™ enabled cell phone located in the vehicle, the cell phone
3 storing a phonebook having entries, each entry including a name text and an
4 associated telephone number; and
5 a vehicle appliance integrated into the vehicle, the vehicle appliance
6 having a Bluetooth™ enabled communications module, memory, a text-to-speech
7 (TTS) module, and a voice synthesizer;
8 the communications module being operable for wirelessly
9 communicating with the cell phone to receive a selected phonebook entry from the
10 cell phone;
11 the TTS module being operable for converting the name text of the
12 selected phonebook entry into a voice tag for play by the voice synthesizer over a
13 vehicle speaker for the operator to hear;
14 the memory being operable for storing the converted voice tag and
15 the associated telephone number of the selected phonebook in a phonebook for
16 access by the voice synthesizer.

1 10. The system of claim 9 wherein:
2 the communications module wirelessly communicates with the cell
3 phone to receive the selected phonebook entry using the OBEX file transfer
4 protocol.

1 11. The system of claim 9 wherein:

2 the vehicle appliance further includes a controller operable for
3 accessing the memory to determine if the converted voice tag of the name text of the
4 selected phonebook entry corresponds to a voice tag of a name text already stored
5 in the memory;

6 if the converted voice tag of the name text of the selected phonebook
7 entry corresponds to a voice tag of a name text already stored in the memory, the
8 voice synthesizer outputs an indication over the vehicle speaker for the driver to
9 hear indicating that the converted voice tag of the name text of the selected
10 phonebook entry corresponds to a voice tag of a name text already stored in the
11 memory.

1 12. The system of claim 11 wherein:

2 the vehicle appliance further includes a voice recognition module
3 operable for receiving a verbal pronunciation of the converted voice tag of the
4 selected phonebook entry by the operator, the voice recognition module being
5 operable for converting the verbal pronunciation into a voice tag for play by the
6 voice synthesizer over the vehicle speaker for the operator to hear;

7 wherein the memory is operable for storing the voice tag converted
8 by the voice recognition module in place of the converted voice tag generated by the
9 TTS module for access by the voice synthesizer.

1 13. The system of claim 9 wherein:

2 the memory has at least first and second phonebooks for storing
3 entries, each phonebook storing a list of entries with each entry including a voice
4 tag and an associated telephone number, wherein one of the phonebooks is operable
5 at a time.

1 14. The system of claim 13 wherein:

2 the vehicle appliance further includes a controller and a voice
3 recognition module, the voice recognition module being operable for receiving a
4 voice command indicative of a selected memory phonebook from the operator, the

5 controller being operable for enabling the selected memory phonebook for use by
6 the operator.

1 15. The system of claim 9 wherein:
2 the vehicle appliance further includes a controller and a voice
3 recognition module, the voice recognition module being operable for receiving a
4 voice command indicative of disconnecting the cell phone from the communications
5 module, the controller being operable for disconnecting the communications module
6 from the cell phone in response to the voice command.

1 16. The system of claim 15 wherein:
2 the voice recognition module being operable for receiving a second
3 voice command indicative of connecting the disconnected cell phone with the
4 communications module, the controller being operable for reconnecting the cell
5 phone with the communications module in response to the second voice command.

1 17. A hands-free telephone system for a vehicle comprising:
2 a Bluetooth™ enabled device; and
3 a vehicle appliance integrated into the vehicle, the vehicle appliance
4 having a controller, a Bluetooth™ enabled communications module, and memory;
5 the controller being operable with vehicle components for generating
6 vehicle diagnostic information;
7 the memory being operable for storing the vehicle diagnostic
8 information;
9 the communications module being operable for wirelessly
10 communicating the vehicle diagnostic information to the device.

1 18. The system of claim 17 wherein:
2 the communications module wirelessly communicates with the device
3 to receive the diagnostic information using the OBEX file transfer protocol.

1 19. The system of claim 17 further comprising:

2 a second Bluetooth™ enabled device operable for storing MP3 music
3 files;

4 wherein the communications module is operable for wirelessly
5 communicating with the second device to receive the MP3 music files and the
6 memory is operable for storing the received MP3 music files.

1 20. The system of claim 19 wherein:

2 the vehicle appliance further includes a voice recognition module
3 operable for receiving voice commands of the operator, wherein the controller is
4 operable with a vehicle radio system to play the MP3 music files over a vehicle
5 speaker for the operator to hear in accordance with the voice commands of the
6 operator.